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SOLAR STORMS & CATASTROPHIC BLACKOUTS

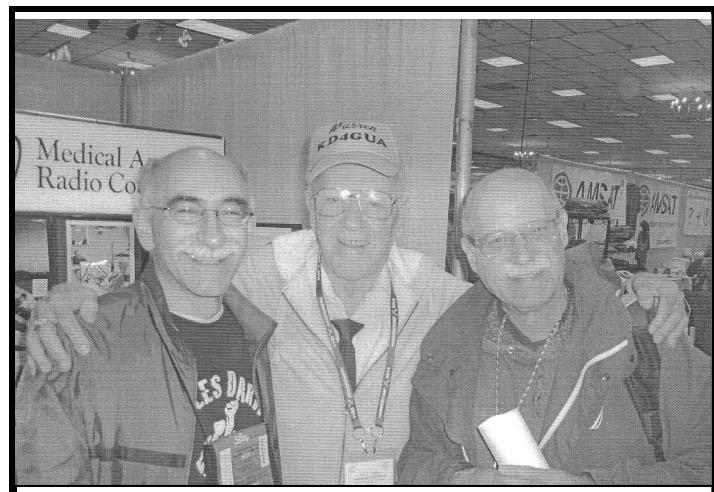
GRID COLLAPSES, GPS & NAVIAGATIONAL SYSTEMS FAIL. SPACECRAFT LOSE COMMUNICATIONS AND STRUGGLE TO MAINTAIN ORIENTATION IN ORBIT. RADIO COMMUNICATIONS ARE IMPEDED.

On Thursday, **September 1, 1859**, a 33-year-old brewer and amateur astronomer named Richard Carrington climbed the stairs to his private observatory near London, opened the dome slip, and as was his habit on a sunny morning, adjusted his telescope to project an 11-inch image of the sun onto a screen. He was tracing sunspots on a piece of paper when, before his eyes, "*two patches of intensely bright and white light*" suddenly appeared amid one large sunspot group. At the same time the magnetometer needle dangling from a silk thread at London's Kew Observatory began dancing wildly. Before dawn the next day enormous auroral displays of red, green, and purple illuminated the skies as far south as Hawaii and Panama. Campers in the Rocky Mountains, mistaking the aurora for sunrise, got up and started cooking breakfast.

The flare Carrington had observed heralded a solar superstorm—an enormous electromagnetic outburst that sent billions of tons of charged particles hurtling toward Earth. When the invisible wave collided with the planet's magnetic field, it caused electrical currents to surge through telegraph lines. The blast knocked out service at several stations, but telegraphers elsewhere found that they could disconnect their batteries and resume operations using the geomagnetic electricity alone. "*We are working with the current from the Aurora Borealis alone,*" a Boston telegrapher messaged an operator in Portland Maine. "*How do you receive my writing?*" "*Much better than with the batteries on,*" Portland replied..

Operators of today's communication systems and power grids would be less sanguine. No solar superstorm as powerful as the 1859 event has occurred since, so it is difficult to calculate what impact a comparable storm might have on today's more *wired* world. A hint came with the Quebec blackout of March 13, 1989, when a solar storm roughly a third less powerful than the Carrington event knocked out the power grid serving more than 6-million customers in less than two minutes. A Carrington-class storm could fry more transformers than the power companies keep stockpiled, leaving millions without light, potable water, sewage treatment, heating, air-conditioning, fuel, telephone service, or perishable food and medications during the months it would take to manufacture and install new transformers. A recent report estimates that such a storm could wreak the economic disruption of 20 Katrina-class hurricanes, costing one to two trillion dollars in the first year alone and taking a decade to recover.

Few objects seem as familiar as the sun—there it is, up in the sky—yet few are so strange. Look through a solar telescope and the yellow disk is transformed into a dynamic wonderland where the planet-size prominences rise into black space like glowing jellyfish, only to loop and slither back hours or days later, as if enthralled by some unseen force.



Blacken David Birnbaum's K2LYV, (on the right) eyebrows a little and you have a perfect image of Bruce Small KM2L (on the left) in Dayton. Introducing the two is Warren Brown KD4GUA (in the Middle.)

LATE BREAKING NEWS

Dayton, Ohio, May 17, 2014...

Change in command...President Mary Favaro AE4BX handed the President's gavel over to Jeff Wolf K6JW today. Mary will become the new treasurer and Richard Lochner K9CIV was elected "President-elect." Marcia Lochner will become the new assistant secretary.

One of the highlights of the convention was the meeting of Dr. David Birnbaum K2LYV of Tampa, FL. with his look-alike, Dr. Bruce Small KM2L of Clarence, NY. David was assigned next seating in Tampa to the Aether news editor who thought he was seeing things! Both are physicists close to the same age, with the same mustache, glasses and voice. Both are from New York state and had never met before—talk about fun-time!

Malin Dollinger KO6MD, Palos Verde's oncologist (malind@cox.net) has a new book coming out in June titled, "*The Myeloma Survival Guide,*" which will be a unique pathway to understanding for new patients. Look for it.

NOTE: Due to hacking, the News Editor has had to change his email address. The new address is warren.brown7@aol.com

WRITE TO US!
We welcome your comments.
Mail to Marco, P.O. Box 127,
Indian Rocks, FL,
33785. Email to
Warren.brown7@aol.com
Letters may be edited for
brevity & clarity.

DAY	EASTERN	FREQ.	NET CONTROLS
Any Day	On the Hour	14.342	Hailing Frequency
Sunday	10:30 a.m. Eastern	14.140	CW Net, Chip, N5RTF
Sunday	11 a.m. Eastern	14.342	Warren, KD4GUA
	(Alternate <u>confidential</u>) Grand Rounds frequency— on or about 14.344 or as announced on the air.)		

MARCO Grand Rounds is held Sunday at 11 a.m. Eastern Time; 10 a.m. Central; 9 a.m. Mountain, and 8 a.m. Pacific Coast time on 14.342. You qualify for one hour Category II CME credit with your check-in.

MARCO'S CW NET IS NOW CALLED THE "Bob Morgan Memorial Net"
Sundays, 10:30 am, 14.140 MHz

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As indeed they are. Neither solid, liquid, nor gas, the sun is made up of plasma, the "fourth state of matter," which forms when atoms are stripped down to naked protons and electrons. All those charged particles make the solar plasma a splendid conductor of electricity—much more conductive than copper wire. The sun is also packed with magnetic fields. Most remain buried inside the sun's massive girth, but some magnetic pipes, as thick as the Earth is wide, emerges on the surface as sunspots. This magnetism choreographs the slithery dances in the sun's atmosphere and powers the solar wind, flinging outward a million tons of plasma every second at a million miles an hour.

Driving all this activity is the intriguingly intricate machinery of an unexceptional star. The sun's core—a seething, 27 million-degree—Fahrenheit plasma spheroid six times as dense as gold—fuses 700 million tons of protons into helium nuclei every second, releasing the energy of ten billion hydrogen bombs in the process. The core throbs gently, expanding when fusion rates climb and contracting when they damp down. Superimposed on this slow, deep heartbeat are myriad other rhythms, ranging from an 11-year sunspot cycle to rhythms spanning centuries.

The energy produced by the fusion in the sun's core is carried outward by high-energy photons as they ricochet through a dense maze of ions and electrons. Matter is so tightly packed in this radiation zone that it takes more than 100,000 years for the photons to emerge into the surrounding convection zone, 70% of the way out from the solar center. After a month or so more, the photons emerge into the photosphere, the part of the sun that we see. From there, it take a mere 8-minutes for them to reach Earth as sunlight.

As one might expect, this titanic thermonuclear furnace makes a lot of noise. The sun rings like a bell in millions of distinct tones. The tones generate ripples on the solar surface which scientists study to map currents deep in the convection zone, a discipline called "helioseismology." Information conveyed by helioseismic sensors aboard NASA's Solar Dynamics Observatory satellite recently enabled Stanford researchers to detect magnetic bundles 40,000 miles below the solar surface and to predict their emergence, days later, as sunspots.

Such data provides crucial information on how solar storms form. The sun functions as a gigantic dynamo, with global magnetic field lines encircling it from pole to pole like a bird cage. Local field lines, entangled with plasma in the convection zone, twist and kink and poke through the surface, forming loops made visible by the hot, glowing plasma. When loops cross, they can essentially short-circuit, causing the tremendous plasma explosions called solar flares. Such flares release the energy equivalent of hundreds of millions of megatons of TNT, spewing x-rays and gamma rays into space and accelerating charged particles to nearly the velocity of light.

The Carrington event of 1859 consisted of a powerful solar flare that produced the second of a rare pair of coronal mass ejections (CME's)—gigantic magnetic eruptions of heated plasma belched into space. The first CME probably reached earth in a normal span of 40 to 60 hours, clearing a path through the solar wind for the second one to make the trip in a mere 7-hours. Their combined impact squashed the Earth's magnetosphere—where the planet's magnetic field interacts with the solar wind—down from its normal altitude of 40,000 miles to 4,000 miles, temporarily eliminating the Van Allen radiation belts girdling the planet. Charged particles entering the upper atmosphere set off intense auroras over much of the Earth. Some people thought their cities had caught fire.

A Carrington-class superstorm probably occurs only once in several

centuries. But even storms of much smaller magnitude can cause considerable damage, especially as humans become increasingly dependent on technology deployed in space.. Solar storms disrupt the ionosphere—the layer of Earth's atmosphere where auroras occur, more than 70 miles above the Earth. The pilots of the nearly 1000 commercial flights routed over the north polar region each year rely on shortwave radio signals bouncing off the ionosphere to communicate above 80 degrees of latitude, beyond the range of communications satellites orbiting over the Equator. When space weather disrupts the ionosphere and interrupts shortwave communications, pilots are obliged to change course, which can cost \$100,000 a flight. A fluttered ionosphere deranges GPS signals as well, results in positioning errors that can be more than 150 feet. This means that surveyors must pack up and go home, floating oil-drilling rigs have trouble remaining on station, and pilots cannot rely on the increasingly popular GPS-based systems employed for landing at many airfields.

UV light emitted during solar flares can also disturb satellite orbits by heating up the atmosphere, which increases drag. NASA estimates that the International Space Station descends more than a thousand feet a day when the sun is acting up. Solar storms could also affect the electronics on communications satellites, turning them into "zombiesats," adrift in orbit and dead to the world.

Unlike satellites in space, most power grids have no built-in protection against the onslaught of a powerful geomagnetic storm. Since large transformers are grounded to the Earth, geomagnetic storms can induce currents that could cause them to overheat, catch fire, or explode. The damage could be catastrophic. According to Storm Analysis Consultants, who study the impact of space weather on the electrical grid, a solar storm like one that took place in May 1921 would today turn out the lights over half of North America. One on the order of the 1859 event could take out the entire grid, sending millions back to a pre-electric way of life for months.

Today, scientists constantly monitor our home star with an imposing armada of satellites that can take images in x-ray and ultraviolet wavelengths blocked by Earth's atmosphere. The Advanced Composition Explorer spacecraft (ACE) monitors the solar wind from an orbit around the L1 libration point, a stable gravitational spot located a million miles sunward of the Earth. The Solar and Heliospheric Observatory (SOHO), carries a dozen detectors that record everything from high speed solar-wind protons to low-speed solar oscillations. STEREO consist of pair of satellites, one preceding and the other trailing Earth in its orbit, that takes 3-D solar images revealing how coronal mass ejections loft off the sun's surface and speed out through space. Meanwhile the Solar Dynamics Observatory, launched into a geosynchronous orbit in 2010, downloads 1.5 terabits of data on the sun's atmosphere, oscillations, and magnetic field.

In October 2013 a new computer model, called *Enlil*, that can predict when a CME will hit Earth, plus or minus six hours—twice as accurate as previous forecasts.

(Information for the above was taken from "SUN STRUCK" which appeared in the June 2012 edition of "National Geographic" magazine.)

SOME IMPORTANT EVENTS IN TELEPHONE HISTORY

- 1876...Alexander Graham Bell is granted a patent to the telephone.
- 1892...Bell makes the first New York-Chicago phone call.
- 1984...After about 70 years as a regulated mono-poly, AT&T is broken up into one long-distance company and seven regional "Baby Bells"
- 2004...Verizon launches its FiOS network, built with fiber optics.
- January 2014...FCC approves "experiments" to shut down traditional phone networks. FCC Chairman states, "The ongoing network revolution could change the world as much as the printing press, railroads and the telegraph."

ARRL CLAIMS FCC DELINQUENT

Submitted by Danny Centers W4DAN

The ARRL (American Radio Relay League) states the visibility of the Commission's enforcement program for the Amateur Service is wholly inadequate, resulting in a widespread albeit inaccurate, public perception that there is no active enforcement in our service.

The most successful—and visible—period of Amateur Radio enforcement in recent years was between 1997 and 2008. According to the League, compliance during that period was a result of “*the visibility in the Amateur Radio community of a single member of the Commission's Enforcement Bureau staff at Amateur Radio events and of keeping the Amateur Radio media fully informed on what was being done to resolve a particular enforcement issue.*” (Guess who?)

FCC-imposed constraints in the past few years have had “a devastating effect on the entire philosophy of the program and its success,” the League told the commission. Among other factors, the ARRL pointed to the “extensive approvals” required before the release of enforcement correspondence. Enforcement actions that/are/taken, the League continued, are not released to the Amateur Radio media. “This deprives radio amateurs of the knowledge that the Commission is indeed investigating and responding to a given enforcement problem. The result is the perception that nothing is being done in a given case, and frustration builds rapidly among the radio amateurs who have to endure the rule violator on an ongoing basis.

Last year Marco was harassed by a known terrorist causing our Grand Rounds of the Air to move frequency. Scores of letters from our members failed to gain even one reply from the FCC concerning the obscene language and interruptions carried on by this one station. Sadly, it had to be assumed that the FCC was inept and not carrying out their responsibilities. That station is still on the air spreading its foul static.

RADIO SPECTRUM POLLUTION

Excerpts from David Sumner K1ZZ, ARRL CEO article in QST, June 2014.

The ARRL has recently filed a complaint with the FCC concerning the use of “Grow lights” marketed by Lumatek LK-1000 electronic ballast. This device, used in conjunction with grow lights for indoor gardening, is in violation of FCC Part 18 rules and is but one of an increasing number of unintentional radiators of radio frequency energy that is adding to the pollution of the radio spectrum.

Radio spectrum pollution from unintentional radiators is not new. Noisy power lines probably existed before there were radio receivers to detect the noise. When TV came along, amateurs and other radio listeners were plagued with harmonics of TV horizontal oscillators every 15.75 kHz across the LF, MF and lower HF bands. Cable TV leakage was a significant problem in the early days of the cable industry and still crops up occasionally. Some early personal computers lacked the shield and filtering required to keep even the small amounts of RF that they generated inside the box. Broadband over Power lines could have developed into a serious source of interference had it not been for the strong opposition mounted by the ARRL.

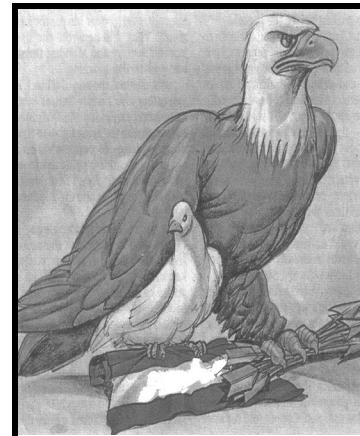
Even devices that are legal to sell and use can cause harmful interference. When it occurs it is the responsibility of the operator of the device to eliminate the interference. The interference “footprint” of a legal device is relatively small and is unlikely to extend more than a couple of doors away, even in a densely populated neighborhood. The issue, therefore, can be dealt with like any other issue between neighbors. If the interference is sporadic or minor, most of us will just live with it. Outside interference—for example, a letter from the FCC to the operator of the offending device—is needed but rarely.

On the other hand, interference from grow lights has been observed a half-mile away. Tracking down the source may be time-consuming and difficult. The likelihood of knowing someone that far away is much less than knowing a nearby neighbor. You may be reluctant to approach them, depending on what they think they may be growing. Given the very limited resources the FCC can devote to enforcement.....the only solution is to prevent illegal electronic ballasts from entering the stream of commerce. And to remove those that do before they reach their users.

3

WHAT IS AN AMERICAN?

Said to have been written by an Australian dentist.



The American Eagle guarding the Dove of Peace.

It has been reported someone recently published an ad in a Pakistan newspaper, offering a reward to anyone who harmed an American—any American. So I thought I would write to let them know what an American is, so they would know one when they found one.

An American is English, French, Italian, Irish, German, Spanish, Polish, Russian or Greek. An American may also be Mexican, African, Indian, Chinese, Japanese, Australian, Iranian, Asian, Pakistani or Afghan. He may also be Cherokee, Osage, Blackfoot, Navajo, Apache, or one of the many other tribes known as

native Americans.

An American is Christian, Jewish, Buddhist or Muslim. He comes from the most prosperous land in the world. The root of this prosperity can be found in the Declaration of Independence which recognizes the God given right of each man and woman to their pursuit of happiness.

An American is generous. Americans have helped just about every other nation in the world in their time of need.

Americans welcome the best, but they also welcome the least. They accept your tired, your poor and your sick, for these have become the ones who have built America.

So you can try and kill an American if you must. Hitler did. So did General Tojo and Stalin and every bloodthirsty tyrant in history. But, in doing so you would just be killing yourself. **Because Americans are not a particular people from a particular place.** They are the embodiment of the human spirit of freedom. Everyone who holds to that spirit, everywhere is an American.

So look around you. You may find more Americans in your land than you thought were there. One day they will rise up and overthrow the old tired tyrants that trouble too many lands. Then those lands, too, will join the community of free and prosperous nations. And America and other fellow “Americans” will welcome them and we will all join together in the joyful pursuit of happiness.

AMERICA ON DRUGS!

Source: CDC report, Health, US 2013.

We are more reliant than ever on prescription meds...the US practically runs on Prozac and heart pills. They are the most prescribed medications. Today, 50% of Americans take at last one pill a day, and many of those drugs can be lifesavings or life-enhancing. But what is pointed out is a troubling uptake in the use and abuse of opioid painkillers.

Percentage of Americans ages 18 to 64 on heart drugs: 17.7%; on cholesterol lowering drugs, 10.7%; antidepressants, 10.6%; painkillers, 10.5%; acid-reflux meds, 9%.

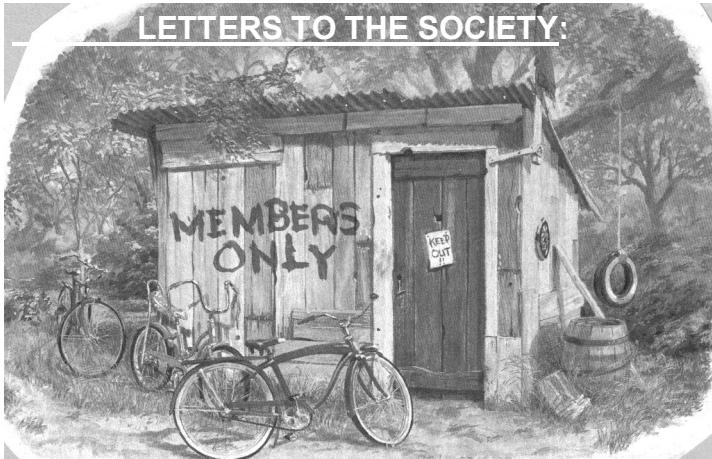
Vaccines work... Only 2% of US deaths are caused by pneumonia and influenza.

There has been an 80% reduction in deaths from HIV since 1996, thanks to effective antiretrovirals.

There has been an increase of 300% in the use of prescription painkillers over the past decade; opioid-overdose deaths have tripled.

10% of Americans take 5 or more drugs daily; 50% take at last one.

Science says: The skin of red grapes contains resveratrol, a powerful polyphenol that has been shown in labs and animals to fight cell aging. But researchers in Chianti itself found that drinking wine did not alone reduce the risk of cancer, heart disease or early death.



Regarding learning the Morse Code while asleep....**Al Breland, KA7LOT** from San Diego..."I tried it once (listening to tapes while asleep) with a history course...didn't work. **Ian Kellman, K3IK**, Shavertown, PA, writes, "What is learned as one falls asleep is what is remembered. **Jerry Ziperstein, N4TSC**, Boca Raton, FL., "Passive receipt of code during sleep is probably useless, however, what is learned during the day is probably reorganized during sleep and thereby improves overall learned "language", (code). **Bob Conder, K4RLC**, Raleigh, NC, our psychiatric psychologist states basically, "It has been tried and doesn't work."

One of our Osteopathic doctors submitted his Marco CME certificate to the Board of Osteopathy and it was returned asking for further accreditation. Apparently the Osteopaths have a different coding, whereas Category II is with them, "Category 2B." Thanks to *Bruce Small KM2L*, we have been able to clarify the situation. Marco, and the late Marco President Bob Currier did receive a letter of accreditation back about 2002 from the University of Mississippi but we have been unable to locate it. Bruce writes, "Googling "Category 2 CME" brings up 5,830,000 hits I didn't read them all, but if you have an AMA account it links you to a FAQ document about the CME program. I don't have an account, and don't care to create one. Our activity clearly qualifies as Category 2B CME under the AOA rules." A new updated certificate has been issued, results pending.

Jerry, N4TSC, Boca Raton states, "What good are Category II CME credits in Florida when the state has just rescinded their credits going only to Category I?" (A changing world. If the docs had their way, perhaps Category I would be done away with!)

EDITOR'S NOTE: Walter Winchell began broadcasting in 1933 to an audience of 25 million people. The Winchell style was unmistakable. He talked rapidly at 197 words per minute...the voice was high-pitched and not pleasant to the ear; but it was distinctive. The staccato quality made every item compelling. He claimed he talked so fast because if he talked more slowly people would find out what he was saying...he began his radio program with a series of dots and dashes operating the key himself. Telegraphers throughout the country complained that what Winchell tapped out made no sense. He realized he hadn't the faintest knowledge of Morse code but he refused to have an experienced telegrapher provide the sound effects for him. He wrote like a man honking in a traffic jam.



It's confirmed...Wearing a high-tech device make you look like a leader. A Vanderbilt Univ. study found people who wear the latest tech gear, such as Google Glass, are seen as more authoritative and as leaders. Being able to operate the devices isn't important, the study said.

A ketchup bottle cap that prevents the 1st squirt from being watery has been developed by a pair of high schoolers as part of a national project. The cap has what looks like an upside down mushroom on the bottom. Ketchup flows around the "mushroom" and out of the bottle, but water is, caught in the reservoir.

A beating heart can become a power plant... Thanks to a stamp-size patch that turns muscle movements into electricity. Researchers at the University of Illinois were able to garner enough electricity to power a Pacemaker. Within five years battery replacement surgeries could be obsolete.

When Malaysia Flight 370 disappeared in March, the world became acutely aware of limitations in aircraft surveillance, but now airlines are in the process of adopting a **new satellite-based air traffic control** technology, which will replace radar as the primary tracking method for planes. The system, Automatic Dependent Surveillance Broadcast (ADS-B) uses a transmitter installed aboard aircraft to stream position and velocity data via a radio-frequency broadcast.

Life might have a limit due to stem cells becoming exhausted. Researchers studied the blood and tissues of Hendrikje van Andel-Schipper, who died at the age of 115, and found that 75% of her white cells were made by 2 stem cells, which researchers think meant that most of her stem cells had died. Scientists speculate that stem cells could be harvested and saved and re-injected later in life to increase longevity.

Statins lower cholesterol but calorie and fat intake increased among users according to a 10-year study by UCLA. The same trend wasn't seen in nonstatin takers. The researchers think some users feel the drug gives them a free pass to continue to eat unhealthfully and not exercise.

Old age is when it take longer to rest than to get tired AND, don't worry about temptation. As you grow older it will avoid you.

Shreddies underwear filters out unpleasant smell of flatulence. While there isn't much you can do to muffle the sound, you can filter out the smell with a special pair of undergarments. *Shreddies* look like normal underwear but have a special carbon fabric filter in the back that creates an odor wall around the buttocks. When gas is passed, the odor gets trapped and mostly scentless air passes through instead. The only downside is they cost \$60 a pair.

Are you a pilot? The FAA is supporting a reform in the Third Class medical certification regulations that would allow for liberalized standards like those for the U.S. Sport Pilot certification. This would allow 3rd Class pilots to fly with simply an automobile drivers license. It would NOT however allow flight in IFR conditions regardless if the pilot is instrument rated or not.



SKY BIRDS "TRADING" CARDS

In 1933, the National Chicle Company issued a series of trading cards containing prominent WW I flyers and their biographical sketches. The gum, sold for one penny, was guaranteed to pull out your teeth fillings but tasted good. These cards would then be "flipped," heads I win tails you win scenario. They were later replaced with today's baseball and football players.

1984, ASTRONAUTS SET OUT ON THE 1ST UN-TETHERED SPACE ODYSSEY.

From Andrew Chalkin's excellent article in *Smithsonian.com*, April 2014.

It's an astronaut's wildest dream: to fly effortlessly through space, like a modern-day Buck Rogers. Thirty years ago, a handful of space shuttle astronauts got to live the dream, thanks to a jet-powered backpack called the manned maneuvering unit, or MMU.

In February 1984, Bruce McCandless and Bob Stewart were the first to test-fly the MMU in space when they each ventured more than 300' from Shuttle *Challenger*. Despite the risks of that untethered moment, McCandless took the test in stride. "*I knew the laws of physics hadn't been repealed recently,*" he later said of his confidence in the MMU.

McCandless' faith in the MMU was the result of long experience: He had played a major role in developing it. The apparatus was the brainchild of engineer Charles "Ed" Whitsett, who researched the idea for his master's thesis in 1960 as a young Air Force officer. By the late 1960s he had joined forces with McCandless to produce a test version tried out by astronauts inside the roomy Skylab space station in 1973. In 1977, Whitsett arrived at NASA, where he and McCandless used the Skylab results to improve their design.

In its final form, the MMU, produced by Martin Marietta Aerospace, weighed 300 lbs and was outfitted with 24 small thrusters powered by compressed nitrogen. Two motion-control handles were mounted on armrests. The push of a button triggered the MMU's attitude-hold mode, in which data from motion-sensing gyroscopes directed the firing of thrusters to maintain a desired orientation in space. The MMU was designed to be so simple to operate that almost anyone could fly it with minimum training.

The MMU proved itself as a satellite-rescue tool in November 1985, when it was used to retrieve a pair of errant communications satellites. But after the Challenger disaster in 1986, NASA re-evaluated shuttle missions, including spacewalks and the MMU was deemed unnecessary. The shuttle had such an amazing capability to fly right up to something, it made more sense to just reach out and grab it, either with the robotic arm or just with a person. The MMU then became simply a really cool piece of technology that didn't quite have a purpose. It was put on the shelf for future use.

A national treasure, the MMU now resides in the National Air and space Museum/Udvar-Hazy Center, at Dulles International Airport just outside of Washington D.C. Check *Smithsonian.com/mm*.



A DOCTOR'S DECLARATION OF INDEPENDENCE

By Daniel Cravotto, Jr., Submitted by Art Larson KK1Y

In my 23 years as a physician, I've learned that the only thing that matters is the doctor-patient relationship. How we interact and treat our patients is the practice of medicine. I acknowledge that there is a problem with the rising cost of health care, but there is also a problem when the individual physician in the trenches does not have a voice in the debate and is being told what to do and how to do it.

As a group, the nearly 880,000 licensed physicians in the U.S. are, for the most part, well-intentioned. We strive to do our best even while we sometimes contend with unrealistic expectations.

The demands are great, and many of our families pay a huge price for our not being around. We do the things we do because it is right and our patients expect us to.

So when do we say damn the mandates and requirements from bureaucrats who are not in the healing profession? **When do we stand up and say we are not going to take it any more?**

The Centers for Medicare and Medicaid Services dictates that we must use an electronic health record (EHR) or be penalized with lower reimbursements in the future. There are "meaningful use" criteria whereby the Centers of Medicare and Medicaid Services tells us as physicians what we need to include in the electronic health record or we will not be subsidized the cost of converting to the electronic system and we will be penalized by our reimbursement. Across the country, doctors waste precious time filing in unnecessary electronic-record fields just to satisfy a regulatory measure. I personally spend two hours a day dictating and documenting electronic health records just so I can be paid and not face a government audit. **Is that the best use of time for a highly trained surgical specialist?**

This is not a unique complaint. A study commissioned by the American Medical Association last year and conducted by the RAND Corp. found that "*Poor EHR usability, time-consuming data entry, interference with face-to-face patient care, inefficient and less fulfilling work content, inability to exchange health information between EHR products, and degradation of clinical documentation were prominent sources of professional dissatisfaction.*"

Meanwhile, our Medicare and Medicaid reimbursements have significantly declined, let alone kept up with inflation. In orthopedic surgery, Medicare reimbursement for a total knee replacement decreased by about 68% between 1992 and 2010, based on the value of 1992 dollars. How can this be? Don't doctors have control over what they charge for their services? For the most part, **No**. Our medical documentation is pored over by insurers and government who then determine the appropriate level of reimbursement.

I don't know about other physicians but I am **tired**—tired of the mandates, tired of outside interference, tired of anything that unnecessarily interferes with the way I practice medicine. No other profession would put up with this kind of scrutiny and coercion from outside forces. The legal profession would not. The labor unions would not. We as physicians continue to plod along and take care of our patients while those on the outside continue to intrude and interfere with the practice of medicine.

We could change the paradigm. We could as a group elect not to take any insurance, not to accept Medicare—many doctors are already taking these steps—and not to roll over time and time gain. We have let nearly everyone trespass on the practice of medicine. Are we better for it? Has it improved quality? Do we have more of a voice at the table or less? Are we as physicians happier or more disgruntled than two years ago?

At 58, I'll likely be retired in 10 years along with most physicians of my generation. Once we're gone, who will speak up for our profession and the individual physicians in the trenches? The politicians? Our medical societies? Our hospital administrators? I think not. Is now **the time for physicians to say enough is enough?**



WHY DO WOMEN HAVE HIGHER VOICES ?

Fundamental frequency or voice pitch is directly related to the length and thickness of the individual's vocal folds (or vocal cords).

The average man's vocal-fold length is approximately eighteen millimeters; the average woman's is ten millimeters.

The tall person of either gender is likely to have longer vocal cords than a shorter person of the same sex and therefore should have a deeper voice.

WHY NOT SEND A HAM FRIEND A MEMBERSHIP IN MARCO

NOT RESTRICTED TO MEDICS. ANY HAM WHO IS A POTENTIAL PATIENT IS ELIGIBLE.
Keep MARCO vibrating!



Is it possible to significantly alter your personality? Experts say you can—but it isn't easy. From the ages of 20 to 65, people report increases in positive traits, such as conscientiousness, and decreases in negative traits, such as neuroticism. Most people tend to become more agreeable, more responsible, more emotionally stable—in other words, their personalities improve.

Researchers have also known that friendly, outgoing responsible people tend to be happier than shy irresponsible unsociable people.

Conscientiousness...Organized, consistent, dependable. These traits tend to increase with age because people become more invested in careers and relationships.

Agreeableness...Polite, trusting, prefers cooperation over competition, feels compassion for others. These traits tend to increase to meet expectations of work colleagues and family members.

Openness...Intellectually curious, inventive, sensitive to art and beauty, imaginative. These positive traits tend to stay constant or decrease with age, but some work to develop them.

Extroversion...Talkative, sociable, assertive, socially dominant. These traits tend to diminish with age as people work on maintaining relationships rather than seek new ones.

Neuroticism...Worrying, feeling stress, prone to feeling sad and anxious, temperamental, moody. These traits tend to diminish with age as people learn to regulate negative emotions, distract themselves and avoid unpleasant situations.

(Information for above was taken from Elizabeth Bernstein's fine article in the Wall Street Journal of April 22, 2014.)

BURNING QUESTION! CAN EYE COLOR CHANGE?

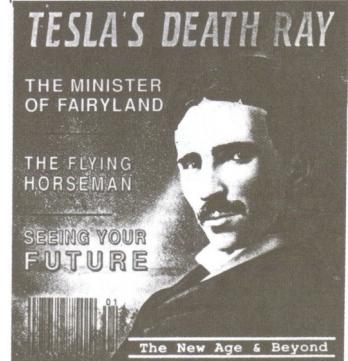
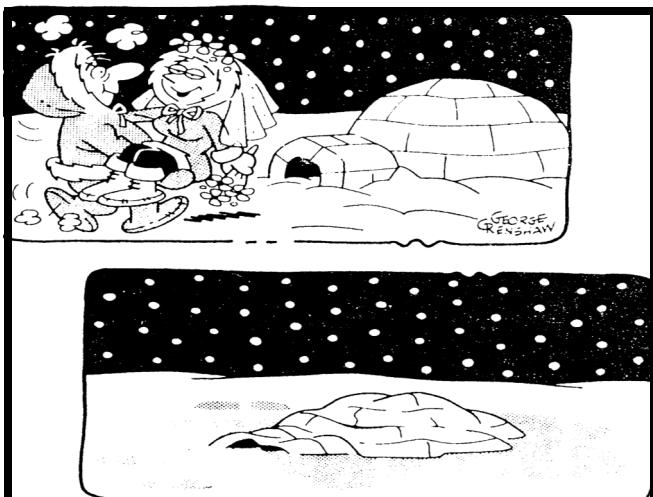


Some people say the color of their eyes has changed with age or can change with their moods. Experts say, however, that eye color

doesn't really change. Most Caucasians are born with light eyes, but the pigment tends to settle by about a year. Some studies suggest that eye color can change a bit with age, but for most people, eye color is fixed after the first year of life.

A change of hue can indicate something is wrong. Heterochromia, a condition in which a person's eyes are two different colors, can be an inherited condition or caused by trauma, which could shake loose some of the melanocytes, making the eye appear lighter or darker.

Heterochromia can also be a sign of disease such as Horner's syndrome, Fuch's heterochromic iridocyclitis or pigmentary glaucoma. But in all cases, changing eye color is very, very rare.



THE MINISTER
OF FAIRYLAND

THE FLYING
HORSEMAN

SEEING YOUR
FUTURE

The New Age & Beyond

The death ray was a theoretical article **beam** or electromagnetic weapon of the 1920s through the 1930s that was claimed to have been invented independently by **Nikola Tesla**, **Edwin R. Scott**, **Harry Grindell Matthews** and **Graichen** among others.

While based in fiction, research into energy-based weapons inspired by past speculation has contributed to real-life weapons in use by modern militaries sometimes called a sort of "death ray," such as the U.S. Navy and its "*Laser Weapon System*." These such armaments are technically known as "directed-energy weapons."

Edwin R. Scott, an inventor from San Francisco, claimed he was the first to develop a death ray that would destroy human life and bring down planes at a distance. Harry Grindell-Matthews tried to sell what he reported to be a death ray to the British Air Ministry in 1924. He was never able to show a functioning model or demonstrate it to the military.

Nikola Tesla claimed to have invented a death ray which he called *teleforce* in the 1930s and continued the claims up until his death in 1943. Antonio Longoria in 1934 claimed to have a death ray that could kill pigeons from four miles away and could kill a mouse enclosed in a "thick walled metal chamber."

During WW II, the Nazis had at least two projects, and the Japanese one, to create so called death rays. One German project led by a man called Schiebold concerned a particle accelerator with a steerable bundle of beryllium rods running through the vertical axis. The other was developed by Dr. Rolf Wideroe and is referred to in his biography. The machine developed by Wideroe was in the Dresden Plasma Physics lab in February 1945 when the city was bombed. Wideroe led a team in March 1945 to remove the device from the ruined lab and deliver it to Gen. Patton's 3rd Army at Burggrub where it was taken into US custody on 14 April 1945.

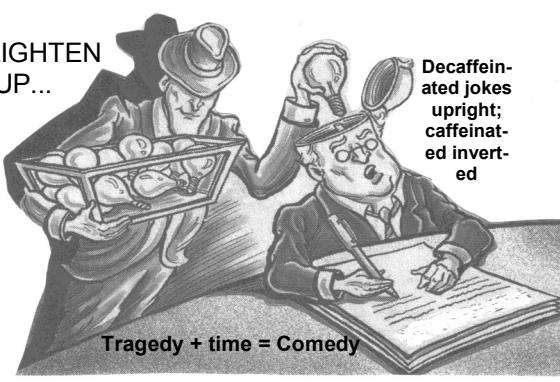
Tesla, at age 78, claimed on July 11, 1934, he had a machine that would destroy 10,000 planes 250 miles away by **concentrated beams of particles** through the free air of such tremendous energy that would stop armies of millions in preserving the peace. He wrote "The flying machine has completely demoralized the world, so much so that in some cities, as London and Paris, people are in mortal fear from aerial bombing. The new means I have perfected affords absolute protection against this and other forms of attack. These new discoveries I have carried out experimentally on a limited scale."

The New York Times printed the following on Dec. 8, 1915...."Nicola Tesla, the inventor, has filed patent applications on the essential parts of a machine, possibilities which test a layman's imagination and promise a parallel of Thor's shooting thunderbolts from the sky to punish those who had angered the gods...suffice it to say that the invention will go through space with a speed of 300 miles-a-second, a manless ship without propelling engine or wings sent by electricity to any desire point on the globe on the errand of destruction, if destruction it's manipulator wishes to effect."

There are now indications that Tesla discovered many of the devices which the U.S., is developing in the US Star War defense system known as the *Directed-Energy Weapon*, a **weapon that emits energy in an aimed direction without the means of a projectile**. They have already been operational on C-130s carrying the *Advanced Tactical Laser*.

Another of Tesla's inventions, the ability to transfer electricity through space, has recently been perfected to a limited degree.

LIGHTEN
UP...



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HISTORY OF THE MEDICAL AMATEUR RADIO COUNCIL

In the fall of 1965, at the Astor Hotel in New York City,

Dr. William L. Sprague WA0CRN, held a meeting of physicians and dentists interested in exploring the formation of a medically oriented amateur radio operators organization. A group of 95 members was organized. The organization was formalized at a meeting in New York on April 16, 1966. M.A.R.C.O. was chartered as a Corporation in the State of New York.

Marco is basically interested in medical and technical education and help to the less fortunate using our MediShare division. We offer one hour of category II CME for check-ins to our weekly Sunday "Grand Rounds of the Air," on 14.307 at 11 am Eastern time.



Since time immemorial Arabian men have ridden majestically on their donkeys, while members of their harem laden down with all sorts of burdens, trudged patiently behind on foot. After WW II, however, all that changed. Harem wives were emancipated. They still carry the burdens, but now they walk in front. Explained the Arab, "*There remain many unexploded land mines....*"

Did you hear about the Dutch boy who stuck his finger in a dyke? She punched him right in the mouth.

There are three spies that get captured. One is French, one is English and the other is Italian. Their captors came into the cell and grab the French spy and tie his hands behind a chair in the next room. They torture him for 2 hours before he answers all questions and give up all of his secrets. They throw him back into the cell and grab the English spy. They tie his hands as well and torture him before he tells them what they want to know. They throw him back into the cell and grab the Italian spy Luigi. They ties his hands behind the chair and begin torturing. 4 hours go by, and the Luigi isn't talking. Then 8 hours, then 16 and after 24 hours they give up and throw him back into the cell. The other spies are impressed, and ask him how he manage to not talk. The Italian spy Luigi responds, "*I wanted to but I couldn't move my hands!*"

During the heavy bombardment of Portsmouth in the early days of the blitz, an air-raid warden ran up to the opening of a public shelter and shouted, "Are there any expectant mothers down there?" "Hard to say, sir," replied a feminine voice, "We've only been down here a few minutes."

After being married for 50 years...I took a careful look at my wife one day and said, "Fifty years ago we had a cheap house, a junk car, slept on a sofa bed and watched a 10-inch black and white TV, but I got to sleep every night with a hot 23-year-old girl. Now....I have a \$750,000 home, a \$45,000 car, a nice big bed and a large screen TV, but I'm sleeping with a 73-year-old woman. It seems to me that you're not holding up your side of things." My wife is a very reasonable woman.

She told me to go out and find a hot 23-year old girl and she would make sure that I would once again be living in a cheap house, driving a junk car, sleeping on a sofa bed and watching a 10-inch black and white TV. Aren't old women great?

shortly and according to union rules, she's next!"
to a 92-year old woman in the corner, "But Ethel here has 67 years
here," "I'm sure you would sit," said the Madam. Then she gestured
room, and pointed to a stunningly attractive blonde and said, "I'd like
union man said. He handed the Madam \$100, looked around the
room, and pointed to a stunningly attractive blonde and said, "I'd like
to such neatly dressed the union man stomped off down the street in
spended, "Why this is a union house, we observe all union
continued until finally he reached a brochel where the Madam re-
search of a more equitable, hopefully unionized shop. His search
and decided to check out the local brothels. When he got to the first
one, he asked the Madam, "Is this a union house?" "No," she replied.
A dedicated union worker was attending a convention in Las Vegas

8 BOB CURRIER MARCO GRAND ROUNDS OF THE AIR

14.342, Sundays, 11 a.m. Eastern, One Hour Cat. II CME

<u>CALL</u>	<u>HRS</u>	<u>NAME</u>	<u>QTH</u>
<i>Because of poor propagation we may have missed you—please correct by sending to warenbrown@aol.com</i>			

KD4GUA	19	Warren	Largo, FL.
W1BEW	19	Bobbie	Tennessee
N6DMV	18	Paul	Trorrance, CA
WB5BHB	18	John	Vancleave, MS
KK1Y	18	Art	Seminole, FL
NU4DO	18	Norm	Largo, FL
KM2L	18	Bruce	Clarence, NY
K4JWA	18	Jim	W. Virginia
WB1FFi	18	Barry	Syracuse, NY
WA9HIR	18	Bill	Berwyn, ILL
KC9CS	17	Bill	Largo, FL.
WB6OJB	17	Arnold	Pac.Pal., CA
N4TSC	17	Jerry	Boca Raton, FL
N5RTF	17	Chip	New Orleans, LA
KD8IPW	17	Mary	W. Virginia
KG6DQF	17	Glen	Palo Alto, CA
N2JBA	16	Ed	Amenia, NY
KNOS	16	Dave	Virginia
K9CIV	16	Rich	Knox, Indiana
N4MKT	15	Larry	St. Petersburg, FL.
W4DAN	15	Danny	Cleveland, TN
K0FS	14	Fred	St. Louis, MO
N9YZM	13	Mike	Crystal Lake, IL
KE5SZA	13	John	Marietta, OK
N5AN	12	Bud	Lafayette, LA
KB5FLA	12	Rich	Arkansas
K3IK	11	Ian	Shavertown, PA
WA1EXE	11	Mark	Cape Cod, Mass.
KD5QHV	11	Bernie	El Paso, TX
WA3QWA	11	Mark	Chesapeake, VA
K6JW	10	Jeff	Palos Verdes, CA
K4RLC	10	Bob	Raleigh, NC
W4MEA	9	Max	Hixson, TN
N9GJ	9	Greg	Cleveland, TN
W8LJZ	9	Jim	Detroit, MI
N9RIV	9	Bill	Danville, IL
AE4BX	8	Mary	Myrtle Beach, SC
W1RDJ	8	Doug	Cape Cod, Mass
W9JPN	8	Wally	Champagne, IL
WB9EDP	8	Harry	Chicago, IL
KE5BQK	8	Linda	El Paso, TX
W2PAT	8	Marvin	S. Carolina.
W0RPH	8	Tom	Denver, CO
NA4DOV	7	David	Ft. Lauderdale, FL
N2OJD	6	Mark	Sidney, Ohio
W6NYJ	6	Art	Beverly Hills, CA
W4TX	6	Doc	Mississippi
WB2MXJ	5	Joe	Metairie, LA
W4UVS	5	Ed	Oak Ridge, TN.
KG6JLE	4	Paul	Atherton, CA.

<u>YEAR</u>	<u>TOTAL CHECK-INS</u>	<u>AVERAGE PER SUNDAY</u>
1998	694	14.46
1999	766	15.95
2000	1,035	20.29
2001	1153	22.60
2002	1383	26.15
2003	1489	28.63
2004	1534	29.50
2005	1517	29.17
2006	1531 (one extra Sunday)	28.89
2007	1591 (one extra Sunday)	30.02
2008	1524 (Only 46 nets)	33.14
2009	1533 (46 nets)	33.32
2010	1591 (44 nets)	36.22
2011	1514 (44 nets)	34.41
2012	1602 (44 nets)	36.41
2013*	1400 (44 nets) (New Freq)	31.82 (Year of Terrorist)
2014	743 (19 nets)	39.11

Record number
of stations
checked-in was
51, on Feb. 24,
2013

*This was the year we had to change frequency due to the terrorist, thus losing a lot of stations in the freq. shift.

DEEP BRAIN STIMULATION FOR PARKINSON'S DISEASE.

As presented on Marco Grand Rounds, Sept. 23, 2012.

We have all seen the devastation of Parkinson's Disease, a disease only the human animal gets—the quiet voice, the unsteady walk, the “shaking palsey, the micro-writing. Until recently the life expectancy in this disease was around 6-7 years. Now, with levo-dopa (1967) that has been prolonged to 12-15 years and with Deep Brain Stimulation (DBS) to 20 years.

DBS was begun in France in 1987 and approved in the U.S. in 1997. It is a treatment not a cure. It will relieve tremor and walking but will have no effect on progression. In 2003, it's use was begun at the Morton Plant Hospital in Clearwater, FL which became the 2nd most active facility for use of this treatment in the U.S. according to Medtronics the developer. Over 360 cases have had alleviation of tremors and walking by inhibiting involuntary movements.

DBS is indicated not as a last resort but when the positive effects of levo dopa begin to subside. Use of drugs will usually give relief for 3 -6 hours and then gradually will require more and more over a shorter period to get the same effect. Eventually the patient will develop tardive dyskinesia from levo dopa overdose. This is the time to consider the use of DBS

With the advent of levo dopa therapy in 1967 surgical treatment of Parkinson's disease ceased until 1992 when ablation of the Thalamus, subthalamic nucleus and the globus pallidus began along with augmentation procedures using DBS.

In the later, small burr holes are bored in the cranium with a pneumatic drill and wires inserted into the brain at prearranged spots determined by stereotactic techniques using a frame, an atlas, software and CT or MRI imaging. Wires are carried down the neck to a battery, similar to a pacemaker battery (*good for about 3 years, costing around \$9000*), inserted under the skin above the clavicle. Following insertion, the patient is programmed one week apart for 3-5 sessions then given a 6 month battery check and annual exams.

Results: 75% of Parkinson's patients do better with continuous stimulation, 84% with DBS and medication. Cost of procedure: around \$65,000 (*fully covered by Medicare.*)

Risks: Hemorrhage in 1-3%; infection; seizures & slurred speech. Can no longer used MRI scanning once the wires are inserted into the brain. The probes must be positioned in the right spots and the patients must be the right candidates.

THE STORY OF “ANCHORS AWAY.”

The Navy song “*Anchors Aweigh*” is one of our most stirring marches. It goes back 108 years to its beginnings as a football song as the U.S. Naval Academy.

It has been a tradition for the bandmaster at the Academy, Lt. Charles A. Zimmerman, to write a march for each class of “middies” during their final year at Annapolis. Assisted by Alfred H. Miles, who wrote the lyrics, the song was sung for the first time in public at the Army-Navy game of 1906 before a crowd of 30,000 in Philadelphia.

Army had defeated Annapolis the previous five years, but Navy turned the tide in the 1906 game by winning 10-0. It was hailed as a great victory and many thought it was the stirring new song that stirred the midshipmen on to victory.

Alfred Miles went on to become a pioneer in early submarines. Bandmaster Zimmerman died in 1916. The song became increasing popular when radio and sound movies arrived in the 1920s.

In 1942, Miles composed “*Victory Verses*” for “Anchors Aweigh,” which went, “*Stand Navy out to sea/ fight our battle cry.*” It was later recorded by the popular bandleader, **Fred Waring**. Miles died in 1956, his stirring lyrics will remain as a song that can stir the weak and inspire the strong—the Navy’s “marching song.”

MINUTES OF MARCO DAYTON MEETING

Submitted by Bruce Small, KM2L

9

THE PREZ SAYS:

By Dr. Jeff Wolf K6JW, new President of Marco

What a great time in Dayton this year. Of course, the weather was typically "Daytonian," but that hardly dampened everyone's enthusiasm. As I now assume the duties of President, I want first of all to thank Mary AE4BX, for her service as our past President. I pledge to do my best to do as well as she has done on our behalf.



The biggest job of the President is to organize the annual meeting. I have taken into account all the input I received while in Dayton this past weekend and tried to reconcile it with my own availability next year. Since the Dayton attendees in various combinations of folks appeared to have availability issues in April, and since May gets very close to the Hamvention (*when some of us will be there to staff the booth*), I've settled on Friday, Saturday and Sunday, March 20, 21, and 22, 2015 in Los Angeles. This means that we'll have our meeting on Friday morning the 20th and the banquet on Saturday, the 21st. Of course, there'll be plenty to do (more will be revealed...later) after the Friday meeting on Saturday during the day, so I hope many of you will want to attend.

It was great seeing everyone who was in Dayton, and I'm looking forward to seeing folks in Los Angeles next March!

MediShare News

Arnold Kalan, WB6OBJ, Director

Marilyn Currier, Jackson MS writes: "The enclosed check is for MediShare, given by Marilyn Currier, in memory of **Bob Currier WB5D** who loved radio—who cut down numerous trees and limbs to make way for his antennae and to put a 50 foot tower in our back yard." (*For those of you who partake in the Marco "Bob Currier Grand Rounds of the Air" on Sundays you may wonder just who Bob Currier was? Bob was our former President who became a Silent Key in 2003; he was a great leader and educator.*)

Also, nice donations from Jeff Wolf K6JF and Mary Favaro AE4BX.

RADIO REFERENCE BOX

Ultra-Low Frequency.....0 to 30 KiloHertz
 Low Frequency (LF).....30 to 300 kiloHertz.
 Medium Frequency.....300 to 3000 KiloHertz
 High Frequency (HF).....3 to 30 MegaHertz
 Very High Frequency (VHF)....30 to 300 MegaHertz.
 Ultra High Frequency (UHF)....300 to 3000 MegaHertz

Audio Frequency (ability to hear).....20 to 20,000 Hertz
 Radio Frequency.....20,000 Hertz plus

60 Hertz = Power Lines
 200-500 Kilo (thousand) Hertz = Navigation Beacons
 All below are known as High-Frequency (HF) Bands

1.8-3 Mega (million) Hertz = 160 Meter Band
 3.5 to 4 MHz = 75/80 Meter Band (126' dipole)
 7 to 7.3 Megahertz = 40 Meter Band (66' dipole)
 10.1 to 10.150 Megahertz = 30 Meters (CW & FSK only)
 14.0 to 14.350 Megahertz = 20 Meter Band
 18.068 to 18.168 Megahertz = 17 Meter Band
 21 to 21.450 Megahertz = 15 Meter Band (22' dipole)
 28 MHz to 29.7 MHz = 10 Meter Band (17' dipole)
 40, 20, 17, 20, 28M are called "short-wave bands"

All below are known as Very-High Frequency (VHF) Bands

50.1 to 54 MHz = 6 Meter Band (Radio Control Models)
 54 MHz = Television Channels 2 to 6
 72 MHz = Radio Controlled Models. 1 Watt output
 88 MHz to 108 MHz = FM Commercial Radio
 108 MHz = Aircraft frequencies begin.
 144 to 148 MHz = 2 Meter Band (Satellite & Repeaters)
 222 to 225 MHz = 220 Band (FM Repeaters)

All below are known as Ultra-Hi Frequencies (UHF)

420 to 450 MHz = 440 Band (Amateur TV)
 470 MHz = Television Channels 14-69
 825 MHz to 870 MHz = Cellular Phones

All below are known as Super-Hi Frequencies (SHF)

2450 MHz = Microwave Ovens

May 16, 2014, Dayton, Ohio... In attendance: Mary, AE4BX, President; Jeff, K6JW President-elect; Danny, W4DAN, Secretary-Treasurer; Warren, KD4GUA Newsletter Editor; Arnold WB6OBJ MediShare Director; Bruce KM2L Director; Keith N3IM, Director; Roger W8CRK Director; Bill WA9HIR Director; Linda KE5BQK Director; Chuck N8CL; Bobbie W1BEW; Bernie KD5QHV; Malin K06MD; Richard K9CIV; Joe WB2MXJ; Chip N5RTF Director and Carl WA3ZZU.

The meeting was called to order by AE4BX at 8:30 AM EDT.

Minutes of the 2013 meeting were approved as read by W4DAN.

Secretary's Report: Danny reported we have 205 members; almost all are paid up. Between January 2013 and March 2014, we added 17 new members. Most of these found us and joined through the Web site.

Treasurer's Report: Danny reported that when Lou WA1HGE was Treasurer, he set up two accounts. One was a CD bearing higher interest. Marco and MediShare funds were co-mingled. Danny recommends separate accounts for Marco and for MediShare. Our current balance is: Marco, \$11,115.15; MediShare \$5,762.78, Total, \$16,877.83.

These funds are tied up in a local bank in New Hampshire, and we have been unable thus far to transfer them to another bank after Lou's death. Our plan is to transfer the money to a national bank and authorize other members of the Exec. Committee as signers. W8CRK will ask his son-in-law, a banker, for clarification as to what steps we must take.

As determined at last year's meeting, Mary will assume the duties of Treasurer upon the completion of her term as President at this meeting. Motion by Keith to move our funds to Wells Fargo. Seconded by Jeff. The motion was carried.

Motion by Jeff to reaffirm Mary as Treasurer, for the record. Second by Arnold. The motion was carried.

Motion by Mary to nominate Bobbie as Asst. Treasurer, seconded by Bernie. The motion was carried.

Web Site report: Bruce reported that he no longer edits the Web site. Dave Lieberman KT8E is the only one with the ability to maintain the site. There has been no recent news from Dave. Danny stated that the Google Ad-Words campaign was suspended as it was not working well. Bruce continues to post news to the Blog and maintains the email listserve. Both are working well.

Chip continue to stream audio of Grand Rounds on Sunday morning. He could use a better quality audio source, as his location's noisy and reception is not always good. Bruce provides a Skype feed, and possibly Chip could use that. Bobbie usually hears Warren quite well, and regularly joins the Skype conference call. It was suggested that he provide the audio feed over Skype.

Grand Rounds Report: Warren would like more active participants at Grand Rounds. Although we have a large number of check-ins, he would like to hear more questions and would be glad to share duties with other presenters. The American Osteopathic Assoc. did not recognize the CME credits we awarded. They classify their credits according to a different scheme than the AMA. This issue has been resolved.

MediShare Report: Arnold reports we have no active projects though our funds would support a small one. We received favorable publicity from support of the T33A DXpedition. Carl suggested that we consider supporting other DXpeditions with a clinical component.

Old Business: The Marco Brochure designed by Bobbie has been printed and is ready for distribution at the Marco booth. Those in attendance each received a copy. Thanks to Keith for setting up the booth.

New Business: Jeff proposed a series of dates for next year's meeting, which will take place in Los Angeles. None of these was universally acceptable, so he will research the issue.

Election of Officers: President: Jeff K6JW . President-elect: Nominees were Jay AA4FL and Richard K9CIV. Richard was elected. Secretary: The request of the Secretary to step down was tabled by the President. Danny remains Secretary. Marcia. XYL, remains a backup. Treasurer: Mary assumes the role of Treasurer.

Directors: Roger reports that John WD8NMV is unable to continue as 4th Call Area Director. No action was take on this request.

The meeting was adjourned at 9:45 AM EDT.

"The Box," a 7-by-10-foot concrete cell is where you are going to spend the next 90 days. It consists of a small bed and toilet with a solid metal door with a small window made of hard plastic. Every morning, for an hour's recreation, a door at the back opens to a "recreation cage": a slightly bigger Box with a tiny, barred window. After 3-months in these cages staring down at the table, people crack—would you ???



In 2005, there were an estimated 81,600 prisoners in solitary in the U.S. That's 3.6% of the 2.2 million incarcerated. The "Box," as psychologists have been saying for decades, damages the mind, but evidence from neuroscience increasingly suggests that it is irrevocably harming the brain also. Think of spending all that time with no TV, no books, no radio, no computer, no person to talk to.

Studies have shown that half of those cooped up in the Box hallucinate constantly. They hear whispers and muttered sounds, which take on menacing meanings; prison guards conferring about amputating a prisoner's leg, someone getting beaten up with sticks. Within 24 hours of being placed in the Box, most couldn't think or concentrate, and experienced powerful sensorial hallucinations; they had strange visions of rocks, eye-glasses, babies; their skin crawled; and they heard choirs trilling in "full stereophonic sound." They experienced spatial disorientation whenever they left their cell.

A little stress-induced cortisol is actually good for you. It reins in the immune system, controls inflammation, and keeps you alert and energized in the morning when its levels are naturally high. But when stress is chronic, the ebb and flow of stress hormones becomes a steady, unceasing seep. The hippocampus is not able to shut down the stress response, leading to weakened immunity, demineralized bones, clogged and narrowed arteries, obesity, impaired memory and cognition, and a susceptibility to psychological problems. Chronically depressed people are likely to have too much cortisol sloshing around their brain through the day, which sufferers of post traumatic stress disorder—and residents of the Box—likely owe their constant state of hyper vigilance to overpowering doses of stress hormones.

Which means, constant stress—battlefield or time spent in the Box can cause—probable **permanent brain damage** which sometimes is beyond the help of normal therapeutic procedures. Does the Box do more harm than good? Are we creating problems or eliminating them? Modern testing indicates we may be turning a temporary problem into a permanent one.

LEARNING CW THE PROFESSIONAL WAY

By Bob Conder, Jr., PsyD, FACPN, ABPP-CN & RP, K4RLC

I appreciated your note about sleep CW training in the military, actually increasing code copy speed, I wish it were so easy as sleep learning, which has **not shown** any efficacy in controlled studies.

Listening to a tape of my anatomy text under my pillow the night before the exam didn't help me, therefore it is hard to imagine those Navy boys making out at Pensacola, Florida in 1917.

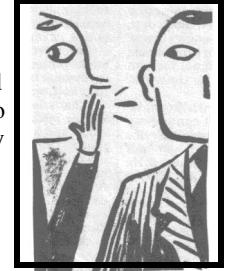
But I would like to share some crazy things I've tried to do to increase my code copy speed since initially learning cw as a Boy Scout. For the last few years, I've been interested in high speed cw contesting and have used some of the NLP Hypnosis tapes (now MP3 files) produced by Peter O'Dell WB2D, a former ARRL staffer who has a NLP (neuro linguistic programming) practice in Boca Raton. These tapes put one in a state of deep relaxation so your logical critical left cerebral hemisphere shuts down and lets your holistic right cerebral hemisphere (site of visual spatial and musical processing) process cw non-verbally.. This has helped with my high speed copy for contesting, but not for high speed rag chewing (www.success-is-easy.com).

So, next step for me is Audiovisual Entrainment, a form of Brain Driving. With this, you listen to sounds at a certain frequency while wearing LED glasses that stimulate visually at a certain frequency range. At very high speeds of stimuli presentation, the brain's neuro-electrical activity will resonate sympathetically at that desired frequency (this is real, as clinical EEGs while getting AVE show the shift in brain electrical activity to the desired frequency stimulation...so, I've been running the old ARRL 20-22 wpm CW training thru the AVE amp while getting stimulation in alpha-beta ranges. It's also working but not a magic bullet and still requires lots of practice. (bconder10@gmail.com) ...I'm at North Myrtle Beach and need to go run a few miles at low tide.

Bob, K4RLC

By Ian Kellman, K3IK

It's all about conditioning and training. That is why it is hard to increase code speed, if it is taught incorrectly. When a child learns to speak, it does so by repetitively hearing and mimicking people around the child. People do not sound like a slow motion audio tape. Why then should someone learn code at 5 wpm when the goal is 20 or 30 or even 60 wpm. The simple truth is you can learn to do 60 wpm or any speed if you don't try to learn it, rather you condition your brain, just as a child does.



Back when ham radio was really AMATEUR radio and we had to learn the code and actually know something before we got our extra class license, we had to take a code test. It was common practice to give the higher speed code test first simply because we wanted to give the newer folks a chance to pass the test. Many folks came in fearing the 5 wpm test. After listening to the 20 wpm test, several would pass the 13 wpm. And the 5 wpm was a cinch. Why? Because we helped train their brain.

Think about it. Struggle to copy 20 wpm for 5 minutes and get only one out of four letters, lousy you say? Nonsense. You just passed the equivalent of 5 wpm. Every other letter is 10 wpm, not a big jump to 12 wpm.

So here goes—pick the highest speed you want and make a series of practice discs at 10% higher speed for the average ham, make your tapes or discs at 30 wph so you can then ragchew on the bands at 20 to 25 wpm with ease. Play the disc in the background for 20 to 30 minutes, 2 or 3 times a day and do not listen to it! Background noise. Do this for four weeks, remember DO NOT TRY TO COPY A SINGLE LETTER, it is background noise.

After four weeks play the same disc and start to pick out letters. Just try to pick out three or four new letters each time. If you want to go faster and do more letters, all the power to you. Remember, at 30 wpm, one in 2 letters is 15 wpm and one in three is 10 wpm, and one in 6 is still 5 wpm. If you can speak your native language and learn the words to a song, you do not even pay attention while you are driving the only reason you will not learn the code is that you didn't try.

P.S. You can learn a language the same way. Want to learn Spanish? Find a Spanish talk channel and just play it in the background every time you drive somewhere. After a month get a dictionary and listen for common words. Yes, you will be amazed at how much you will quickly understand.

Good luck. The only thing affecting my code speed is my older ears. Used to ragchew at 30 to 35 wpm. Now, some of the sounds are starting to run together, so stick to the 20 to 25 wpm folks. I used to speak a smattering of several languages. No expert, but used to be fluent in French, and do some chatting in a few others. Trick is to learn some vocabulary and find someone to talk to. Not as good in any as I used to be, but that is just disuse atrophy.

Ian, K3IK (k3ik@epix.net)

DO SUBMARINES HAVE ANCHORS ?

They sure do. Submarines need anchors for the same reason that other ships do. Any time a sub needs to maintain its position on the surface but doesn't happen to be near a pier or another vessel, the anchor is used. Anchors aren't needed while subs are submerged, but subs have to resurface sometime, so anchors come in handy.

In a rough sea with the anchor down, the ship will tend to position itself perpendicular to the wind, to this extent, an anchor might help cut turbulence on the surface.

But subs aren't noticeably more unstable on the surface than other ships. The worst instability on a submarine is usually experienced in the process of diving or resurfacing; as the centers of gravity and buoyancy change, so do the complexions of some of the queasier sailors.

BACKGROUND: At the recent Marco meeting in Myrtle Beach, SC., Wayne Rosenfield, K1WDR came to the Aether News Editor with a wonderful story of the heroism by a ham operator named Capt. Kurt Carlsen W2ZXM of the "Flying Enterprise," a ship caught in a hurricane in the North Atlantic in 1951. Ironically, the News Editor, at the time, was a Navy medical officer aboard the USNS General Leroy Eltinge that stood by to possibly rescue passengers aboard that very ship. On top of that, the News Editor's "Elmer" was a South African ham, Olliver Pierce WU4i, who at that time was corresponding by radio with Carlsen. Below, is this wonderful story, "Simple Courage," written by Frank Delaney, ISBN 1-4000-6524-0, available at Amazon.com

In late December 1951, Capt. Kurt Carlsen, 37, had run into a hurricane off the South English coast aboard his cargo vessel *Flying Enterprise*. The Captain ordered "abandon ship" and a line was passed from a rescue lifeboat and passengers and crew were ordered to jump into the raging waters with lifelines attached, but the Captain remained on board. Prior, by the time she was ready to return to New York from Hamburg, *Flying Enterprise* was loaded with consignments of which have contributed to the half century of questions hanging over her—just why did *Flying Enterprise* become a mystery ship and why did her Captain refuse to leave his ship. The ship left Hamburg on Dec. 21, 1951 for New York and the unexpected. A storm soon arose and in the midst of the storm the *Flying Enterprise* snapped open amidships.

This appalling development preoccupied the U.S. Coast Guard investigation: "After a night of pitching and rolling, without pounding, the vessel, at about 0630 on 27 December 1951, riding high up on a heavy sea, suffered fractures. The cracking was heard in all parts of the ship. Examination determined that there were two main fractures."

Imagine the freighter as a long piece of wood. Now visualize a great savage ogre, hacking down on her with a tomahawk, twice, three, four times—but not quite slicing through. Or, reaching down and plucking the ship out of the water, the giant grasps the bow and stern in his huge grip and tries to bend the ship, in order to break her in half. She yields a little by cracking in the middle but she doesn't break and, like a child in a tantrum with a toy, he tosses her back in the water on her side.

Flying Enterprise's metal plates split to the waterline. The fissure opened widest just behind the hatch of Hold 3, right at the ship's main superstructure, which houses the ship's "buildings"—the wheelhouse. From each of the front corners of the housing, a wide split ran across the plating on both sides of the deck and tapered in thin slivers down the ship's sides. Capt. Carlsen himself, reported the noise as a "terrific, loud snap like a pistol shot."

She righted herself after a fast, initial listing, and sailors looking out of the accommodation-block portholes could see the split. At that time, the seas were running 40' high from trough to crest. Each wave spooled out as long as 300 yards. If giant hands had kept pressing down on the bow and the stern, *Flying Enterprise* would have been bent upward in the middle and would have entirely split in two amidships, along this new horrible fault line, and every person on board would have been catapulted into the air. But even though Carlsen knew that this freighter had suffered critical damage, he also knew that the had been lucky, because the cracks attenuated into hair-thin lines as they stretched down each side of the ship, towards the water.

In December 1941, in anticipation of American involvement in the Second World War, the president of the U.S., famously launched a series of freighters as the supply vessels of the U.S. Navy. Since the first ship off the docks had been christened *Patrick Henry*, after the Revolutionary War patriot they became known as "Liberty ships." They had riveted keels—but these proved liable to cracking under storm pressure. The C1 class, of the same workaday, workhorse design, had predicated and then overlapped the Liberty ship, and the C1-B had been built with a welded keel, countering this tendency to split. And yet the Coast Guard experts concluded, that S.S. *Flying Enterprise* on 27 December, 1951, in approximate position 50°41'N 15 degrees26' W, suffered a complete fracture of the weather deck."

Including officers, *Flying Enterprise* carried forty crew. Some dozen of them had to do with engine work, including oilers and wipers—men who do exactly what it sounds as if they do: they oil the machinery and

they wipe it clean. A steward and two messmen, who served and cleaned, supported three cooks.

Typically, merchant marine ranks descend from captain to first (or chief) mate, second mate, third mate, to fourth mate, able (or able-bodied) seaman, and ordinary seaman (also called "mariner one" in some seas). On this voyage under Carlsen, six able seamen sailed and three ordinary. As well as chief, second, third and fourth mates, he had his boatswain, Janssens, who had been on *Flying Enterprise* for two years (*The boatswain ranks below the second mate*).

Carlsen learned the drama of the fracture at the mate and boatswain levels. These were the seamen with sufficient training and experience to grasp that a cracked ship could crack wider and worse. Water had already flooded in through the fissures, and Janssens went forward to the bridge.

"I told the old man it was cracked. Where? He says. I said, "On port and starboard, just outside my porthole. I didn't know yet that she was cracked on the after-end of number three hatch on the port side. I found that out afterwards." The boatswain then asked Bartak, the chief mate, to muster all hands on deck. "I said, "You must get everyone out. This is an emergency case. My life is just as important as everybody else's. So he says, "What are you going to do, Boatswain?"

Janssens knew what he was going to do; he was simply going to follow the captain's orders. Carleson, the intuitive and practical man, told him—and saw nothing extraordinary in the suggestion—to try to lash the ship together again. The crewmen went out on deck, into winds about 90 mph into driving rain and spray, with waves up to 40' high smashing over them. Using lengths of stiff cable and wooden blocks to tauten them, Janssens and his crewmen winched yards of wire around the bitts, the metal stanchions or bollards welded to every ship's deck for making fast anchor chains or deck cargo.

The boatswain reckoned that the crack at its worst point measured an inch and a half wide. If they succeeded in tightening it by at last half an inch, they would achieve a great deal. It might control the volume of water pouring in and keep it low enough to avoid drenching the mailbags in No. 3 Hold, directly below the crack. And it might save the coffee used as dunnage. So they winched, they hauled, they tightened wires from every available binnacle to every available spur and gradually they could see the crack, at its widest stretches, squeezing closed.

Janssens now relayed the next stage of Carlsen's orders to his seamen: "*Get a two-by-four and start to make a ladder, a scupper on both sides of the crack and secure them so that they can't be washed out.*" When he was satisfied that the wires might indeed hold the cracks tighter, he had some of his crew use two-by-fours to construct a frame, a breakwater, on either side of the most vital parts of the cracks. Then he ordered others to start mixing cement. He then had them pour the cement into this long narrow wooden frame that ran across the deck over the fissures. Carlsen had asked his boatswain to repair a cracked steel freighter with concrete and they had literally plastered over the cracks. They then placed a canvas screen across the deck where the crack occurred so the water wouldn't go into it. Then, Carlsen instructed the crew to pile sacks of naphthalene from the deck cargo on top of the wooden breakwater, as extra protection over the fissures. *And it all worked!*

Luckily, the ship had righted herself immediately after she'd cracked. The pumps, after six or seven heaves, made the sucking noise that means they have run dry. As Janssens himself put it, "*The crack and the leak caused by the crack, we had actually under control and she was not taking on any more disturbing amount of water than the bilges could take care of.*"

Carlsen still felt confident in his ship, even in that weather, even with her decks patched with still-wet cement. He also felt confident in his own seamanship and saw no need to declare an emergency or ask for help, and he wrote a signal that betrayed no panic, no anxiety—nothing but professional concern.

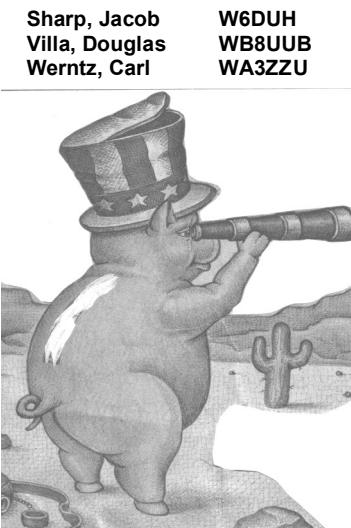
David Greene, the radio officer sent out a message at half past two—a simple notification to Hans Isbrandtsen, in New York that his ship had cracked. No further details were included and at four o'clock *Flying Enterprise* received an acknowledgment that merely said, "Your No. 8 noted." (The Isbrandtsen Line gave numbers to all messages from a traveling ship.)



(continued next edition)

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Dollinger, Malin	KO6MD
Fatta, Louis	KB9OOM
Figlock, Thadeus	W1HGY
Grovenan, Howard	W6HDGQ
Halik, Frederick	K2EU
Hargadon, Bill	WA9HIR
Haskell, Bruce	WD4MLM
Hoenig, Judith	N3MBW
Hoenig, Gene	N3HG
Jeutter, Dean	K3GGN
Johnson, Greg	N9GJ
Judge, Frank	N8YIY
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Krasowski, Linda	KE5BQK
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